MV megavolt

M_v bearing friction torque due to hydrodynamic fluid friction

n pinion speed; load life exponent (experimentally based, with consensus values published in the bearing standards; typically, $n = 3$ for ball bearings and $n = 10/3$ for roller bearings); number of triangles in regular polygon; independent contact points conducting in parallel; bearing speed

N newton

N number of cycles; normal solution; angular velocity of cylindrical contact; bearing speed; normal force

NA numerical aperture

NASA National Aeronautics and Space Administration

NBS National Bureau of Standards (former name of NIST)

NDE nondestructive evaluation

NER erosion resistance number

n_i inner ring speed

NIST National Institute of Standards and Technology

nm nanometer

n_m cage speed (rolling-element orbital speed)

NMMA National Marine Manufacturers Association

n_o outer ring speed

No. number

N_θ rationalized incubation period

NOR incubation resistance number

NPSH net positive suction head

NPSHA available net positive suction head

NPSHR required net positive suction head

n_{RE} ball or roller speed about its own axis

ns nanosecond

NSp not specified

$N(\Lambda)/N_{cal}$ relative life factor

$N_{\mu e=0}$ fatigue life when surface traction equals zero

Oe oersted

OECD Organisation for Economic Cooperation and Development

OFD oxyfuel detonation (spray)

OFP oxyfuel powder (spray)

OFW oxyfuel wire (spray)

OMCVD organo-metallic chemical vapor deposition

ORNL Oak Ridge National Laboratory

OSHA Occupational Safety and Health Administration

oz ounce

p page

p pressure; hydrostatic pressure acting on the surface

p^* local asperity contact pressure; equilibrium vapor pressure at an evaporant surface

$\bar{p}$ average (bulk) hydrodynamic pressure

P pearlite

P specific load or unit load; pressure; transmitted power

P_a absolute ambient pressure

$\bar{p}_a$ average (bulk) asperity contact pressure

Pa pascal

PA plasma arc (spray); prealloyed; polyamide

PACVD plasma-assisted chemical vapor deposition

PAN polyacrylonitrile

PAO polyalphaolefin

PAPVD plasma-assisted physical vapor deposition

PBT polybutylene terephthalate

PCD polycrystalline diamond

PCV positive crankcase ventilator

PDF probability density function

Pe Péclet number

PEEK polyetheretherketone

PEI polyetherimide

PEK polyetherketone

PEP passive extreme pressure

PES polyether sulfone

PETN pentaerithritol tetranitrate

PETP polyethylene terephthalate

PFPE polyperfluoroalkylether

pH negative logarithm of hydrogen-ion activity

p_H maximum Hertzian contact pressure

PH precipitation hardenable

P_H hardness; Brinell pressure

PHL plastohydrodynamic lubrication

p_i pocket pressure in hydrostatic bearing

PKA primary knock-on atom

PLP percent of large particles

p_m flow pressure or hardness of material

PM permanent mold

P/M powder metallurgy

PMMA polymethyl methacrylate

P_N nominal normal stress on contact patch

p_0 yield pressure

POD pin on disk

POF pin on flat

POM polyoxymethylene

P_{or} static equivalent radial load

POR pin sliding against the cylindrical surface of a rotating ring

ppb parts per billion

ppba parts per billion atomic

ppm parts per million

ppmm parts per million by mass

PPS polyphenylene sulfide

ppt parts per trillion

PSD power spectral density

psi pounds per square inch

psia pounds per square inch absolute

psig gage pressure (pressure relative to ambient pressure) in pounds per square inch

PSII plasma-source ion implantation

PSZ partially stabilized zirconia

PTA plasma transferred arc

PTFE polytetrafluoroethylene

P_u fatigue load limit

PVC polyvinyl chloride

PVD physical vapor deposition

PVDF polyvinylidene-difluoride

q heat flux distribution; oil flow rate

Q thermal energy generated per unit time

q_{av} average heat flux distribution

$\bar{Q}_c$ contact stress

Q_{gen} heat generation

Q_i rate of heat supplied to body i

r radius; radial distance of receiver from source; resistivity

R roentgen

R radius; gas constant; reliability expressed in terms of percent survival; resistance

R force vector

r_0 relative radius at an area before wear

R_0 surface radius with lubricant film

r_1 radius of surface 1 at area before wear

r_2 radius of surface 2 at area before wear

r_I radius of rolling body I

r_{II} radius of rolling body II

R_a surface roughness in terms of arithmetic average

RA reduction in area

r_B bushing radius

RB reaction bonded

RCF rolling contact fatigue

RCW rolling contact wear

RDX cyclotrimethylene trinitramine

R_e equivalent radius of curvature; rationed erosion rate

RE rare earth

Ref reference

REF relative erosion factor

rf radio frequency

RH relative humidity

RIP reactive ion plating

rms root mean square

R_n neutral radius

R_p single predominant peak height; leveling depth

rpm revolutions per minute

R_{pm} mean height of highest peaks on five adjacent sampling lengths; average leveling depth

RPOF reciprocating pin on flat

R_q rms (root mean square) roughness

R & O rust and oxidation inhibited

r_s shaft radius

RS reactive sputtering

R_{sk} skew roughness

RSOF reciprocating, spherically ended pin on a flat surface